

HABITAT SELECTION IN SHORT-TAILED BANDICOOT RAT *NESOKIA INDICA* GRAY

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Different rat species are found in different parts of the country. It is obvious that each rat species can establish itself under a set of environmental conditions. Naturally the short-tailed bandicoot rat, *Nesokia indica* Gray also established itself in areas which are more suitable for its habitation. It was seldom observed that some part of same field (uncultivated) was heavily habited with *N. indica* and the rest was free from . Therefore, it was of interest to find out the factors which helped them to habitate themselves in such parts. This study investigates factors viz., soil crust hardness, soil moisture content and the vegetation cover of infested and non-infested parts of fields.

Studies were conducted at the Indian Agricultural Research Institute Farm during the year 1977. Two plots, each measuring 50 x 10m, were selected. One plot was having abundant population of rats, the other was free from the rats. The distance between two plots was 50m. Each plot was divided into 15 sub-plots, each measuring 10x3.3m. Hardness of soil crust upto 5 cm depth was measured with the cone penetrometer (Soil test Inc., 2205 Lee Street, Evanston, Illinois, U.S.A.) from 4 spots in each sub-plot. The results of soil crust hardness were expressed in kg cm^{-2} . Soil samples were also drawn from same spots where the penetrometer was inserted and the moisture content was determined on dry weight basis by keeping samples in oven at $100 \pm 2^\circ \text{C}$ for 24 h. The mean values for soil hardness and moisture content for each sub-plot were worked out. The mean vegetation cover per sq m (on dry weight basis) was also determined.

Results suggest that the soil of field free of rats was harder than the soil of the field infested with rats. In the former case, the soil crust hardness ranged between ($\bar{x} \pm \text{SE}$) 0.6 ± 0.01 to $3.70 \pm 0.1 \text{ kg cm}^{-2}$ where they failed to dig burrows; in latter case it was between 0.30 ± 0.01 to $1.60 \pm 0.05 \text{ kg cm}^{-2}$.

It is observed that the soil of field free of rats was having less moisture content than that of the field infested with rats. In the former case the moisture content ranged from ($\bar{x} \pm \text{SE}$) 0.80 ± 0.30 to $1.47 \pm 0.80\%$ and, in the latter case, it was between 7.36 ± 0.81 to $22.72 \pm 0.92\%$.

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Results on the vegetation cover showed that the mean cover ($\bar{x} \pm SE$) of $21.65 \pm 5.28 \text{ g m}^{-1}$ was found in the field free of rats, whereas $600.96 \pm 48.97 \text{ g m}^{-1}$ was in the field populated with rats. The composition of vegetation cover of fields with and without rats was same for both the fields. The composition of vegetation consisted *Chenopodium album* (Chenopodiaceae); *Saccharum spontaneum* (Graminae); *Cannabis* sp. (Urticaceae); *Cynodon dactylon* (Graminae) *Coronopus didymus* (Cruciferae); *Polypogon* sp. (Graminae); and *Tridax procumbens* (Compositae). Thus, the species of *N. indica* present in and around the Union Territory of Delhi selected habitats with high moisture content and with good vegetation coverage.

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